

## COLLECTION METHOD FOR NEW YORK WEEVIL, *ITHYCERUS NOVEBORACENSIS*, ADULTS (COLEOPTERA: ITHYCERIDAE)

Eric A. Stavney, Kenneth F. Raffa<sup>2</sup>

ABSTRACT: A passive collection method for capturing New York weevils, *Ithycerus noveboracensis*, is described.

Larvae and adults of the New York weevil, *Ithycerus noveboracensis* (Forster) (Coleoptera: Ithyceridae), feed on roots and foliage, respectively of Betulaceae, Juglandaceae, Fagaceae, and Rosaceae (Sanborne 1986). Populations of these weevils can occasionally reach injurious levels in fruit orchards (Lugger 1899, Washburn 1902). The only available collection method for either feeding stage consists of active searching. This approach has the disadvantages of being highly labor-intensive, non-quantitative, and inefficient because a simultaneous survey is not possible on several sites or large trees.

We have collected *I. noveboracensis* adults in a passive trap during routine monitoring of the pine root collar weevil, *Hylobius radicis* Buchanan. The traps consist of aluminum screening wrapped around the trunks of red pine, *Pinus resinosa* Ait. (Maki 1969), approximately 100 cm above the ground. The screening was stapled to the tree, and the upper part of the screen was shaped into a cone and inserted into a glass bottle (Fig. 1). Insects crawling up the bole of the tree are funneled into the collection bottle where they become trapped. The traps were checked at least once every three weeks. Adult weevils were captured and sexed by inspection of the genitalia, and females were examined for eggs. The collection sites were 15-40 year old red pine plantations.

Adult *I. noveboracensis* were collected from four different sites in Wisconsin during June and July, 1987 (Table 1). At each site where New York weevils were found, *Quercus alba* L. seedlings or mature trees were within 20-30 meters of the pines on which weevils were caught. At most sites, *Quercus rubra* L., *Quercus macrocarpa* Michx., and *Quercus velutina* Lam. were also present, but were also at least 30 meters away. *Betula papyrifera* Marsh. and *Populus tremuloides* Michx. were typically mixed in with the oak. No weevil feeding was observed on the branches of the oaks or other trees.

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<sup>2</sup>Department of Entomology, University of Wisconsin, Madison, WI 53706.



Figure 1. Aluminum screen trap with glass jar used to collect *I. Novaboracensis* adults.

Occurrence of *I. noveboracensis* on pine is incidental, as we observed no feeding on this host in the laboratory or on pine twigs held in the collection jars (except when *Hylobius* weevils were present). Conversely, substantial feeding on *Q. alba* and *Q. velutina* twigs held in a laboratory glass arena was observed.

Our passive collection method is very effective and may be useful for biological studies of this or related species. Most of the weevils were dead when found in the traps. However, if live weevils are needed, our laboratory results suggest that including white oak twigs in the collection jars might improve survival.

Table 1. *I. noveboracensis* captured in screen traps on red pines in Wisconsin in 1987.

Date	Males	Females	Location
15 Jun 87	2	0	Town of Evergreen, Washburn Co.
22 Jun 87	0	1	Town of Evergreen, Washburn Co.
23 Jun 87	1	0	Town of Jackson, Burnett Co.
23 Jun 87	1	0	Town of Evergreen, Washburn Co.
3 Jul 87	0	1	Town of Dayton, Waupaca Co.
6 Jul 87	2	3	Town of Evergreen, Washburn Co.
6 Jul 87	0	2	Town of Jackson, Burnett Co.
21 Jul 87	0	1	Town of Gordon, Douglas Co.
Total	6	8	

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